



**Austin Software Council**  
of the IC<sup>2</sup> Institute at  
The University of Texas - Austin

**Strategic Plan**  
**for**  
**Software Preeminence**  
(Summary)

**1993 - 1998**

**Prepared by**  
*ASC Strategic Planning Group*

## Scope

This plan details the Austin Software Council's strategic vision of what constitutes the Austin region's future software technological destiny, and outlines how that destiny will be realized. As a living document, it is expected to grow and change in response to the continuously evolving needs, goals, technologies, and objectives of the Austin region. The contents herein describe the constituent members affected by this plan, the focus and directions those members wish to pursue, and the actions required to achieve their strategic objectives.

## Who We Are

### **How We Started**

As the 1980's came to a close, it became increasingly clear to a number of knowledgeable people that a major trend was developing in the computer industry. Software had traditionally been viewed as an adjunct to hardware development; however, it now was evolving into an ever more important factor in new computer technology. Among others, Dr. George Kozmetsky and his colleagues at the IC<sup>2</sup> Institute not only noted the growing significance of software to the national and world economy, but also realized the special capability of the Austin regional area to gain preeminence in this vital area of technology. Acting on this realization, IC<sup>2</sup> organized and conducted a major conference in October 1991 entitled *Software Engineering in the 90s: Perspectives for Austin's Growth as a Software Center*.

One of the results of this conference was a wide-spread appreciation throughout the Austin community of the special opportunities afforded by this emerging technology area. The interest of many individuals and organizations in promoting the establishment of Austin as a world-class center for the development, application, and marketing of software led to the establishment of the Austin Software Council (ASC) in 1993. The ASC would serve as a catalyst to synergize the technological and business communities.

In addition, the ASC provided a framework for gathering resources, casting a vision, and focusing efforts toward ongoing actions which would propel that vision into reality. During this formation period, IC<sup>2</sup> continued to provide essential support to the new council in the form of facilities, administrative support, and, most importantly, new ideas and commitment.

As was envisioned, the council membership now includes people with a wide variety of talent, training, and experience. In reality,

the strength and promise of ASC must be founded on the involvement and commitment of an association of people with diverse backgrounds, skills, and interests, but with a common vision, mission, and sense of purpose.

### **Where We Have Been**

At the October 1991 conference, ASC shared its mission to promote the development of an environment and an infrastructure which will cause the Austin region to become the world's information software capital. To do so, ASC members believed that we must create not just a new organization, but a state of mind to fulfill our chosen mission. For more than a year small and large group meetings were held between segments of our growing community. Discussions focused on how we, as a community of technology interests, could best help ourselves become second to none.

The Austin Software Council's birth as an organization occurred February 24, 1993 at an ASC conference titled *New Software Technologies: Their Impact on Business*. That particular conference focused on two trends in software product development: object-oriented systems, and "open systems". These trends were of particular importance to the concurrent launching of ASC, due to the significant impact they have, and will have, on Austin's role in the world marketplace.

We must help create and integrate new paradigms required for success in the 90s and beyond. We must help our community integrate those paradigms with minimum pain and maximum infrastructure support for world wide impact. Therefore, we have determined ASC's core role to be one of communication.

### **Where We Are Now**

The Austin Software Council has become an alliance between an eclectic mixture of stakeholders combining their energies to guide the Austin region on its path to 1998. Some of those community members include:

- IC<sup>2</sup> Institute
- Austin City Council
- Greater Austin Chamber of Commerce
- Travis County Commissioners
- Technology Advisors Group
- UT Graduate School of Business
- UT Computer Science Department
- UT Software Quality Institute
- Texas Attorney General's Office

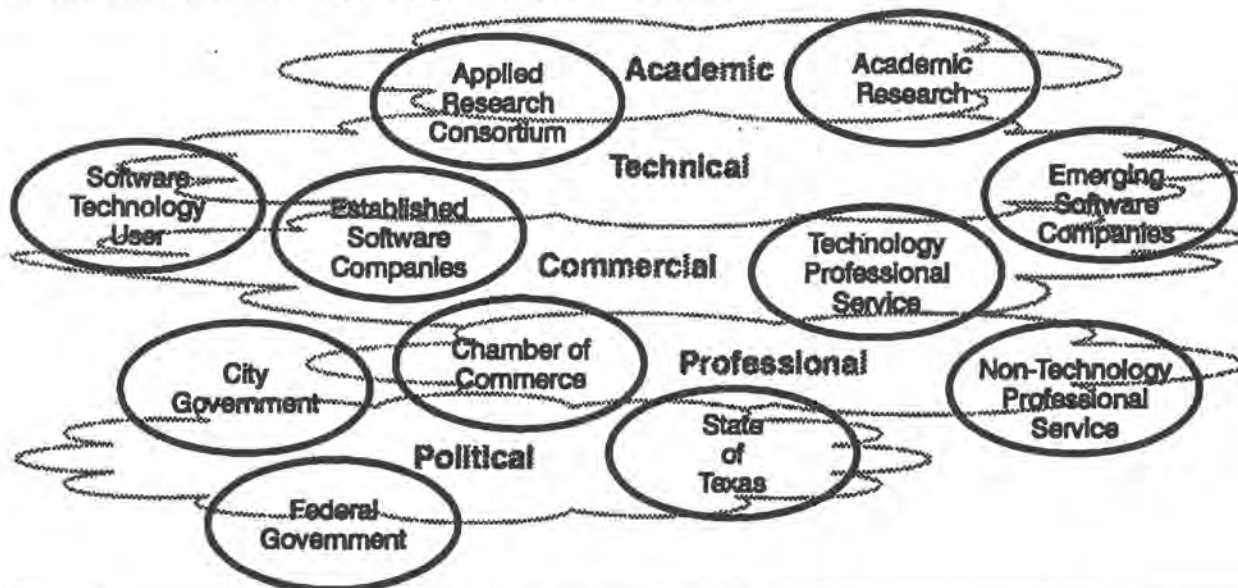
- Texas Department of Information Resources
- Texas Department of Mental Health Mental Retardation
- Texas Department of Commerce
- Austin Technology Incubator
- Innovative Business Accelerator
- Texas Capital Network
- UT-Austin Entrepreneurs' Council
- MCC
- SEMATECH
- ASSESPRO

More than 160 businesses in the Austin region already belong to ASC, with that number continuing to grow each week. ASC's first international member is ASSESPRO, a professional alliance of software companies in the Curitiba, Parana State, Brazil area. ASC membership rolls reflect organizations and individuals representing a multitude of interests. Figure 1 categorizes this diverse mix of ASC members and their interests as they apply to the success of Austin's recognition as a world technological center.

### Where We Want To Go

#### **Mission**

The ASC envisions the Austin region as becoming the preeminent world resource in the innovation, development, and application of information technology; and in the marketing of information technology-based products and services.



*Figure 1. ASC Members Embody the Diversity of Austin's Vested Interest Groups.*

To realize this vision, the Austin Software Council crafted a mission statement which capitalizes on regional infrastructure and organizational strengths:

*Promote the creation and development of an environment and an infrastructure which will cause the Austin region's organizations -- academic, private, public, and volunteer -- to make Austin the information software capital of the world.*

Achieving this mission requires structured definition of goals, identification of strategic directions, and description of a process or methodology as an enabling mechanism. When defining ASC goals, we discovered the absolute criticality of the communication process necessary to identify our strategic directions. Interestingly enough, the communications process we selected became integral to the method required to implement all strategic directions. This discovery reinforced the previous determination of ASC's core role as being that of a communications facilitator.

Given an effective and consistent means of communication, the elaboration of each strategic direction becomes iterative in nature and follows the same model of implementation. We describe this synergistic communications process and implementation model collectively, when we identify our strategic directions and the methods for pursuing them.

## Goals

The ASC strives to accomplish its mission through the establishment of discrete goals which singly and collectively promote global recognition of the Austin region as the premier software center of excellence. These goals include:

- establish the Austin region as the software technology center of the world by 1998;
- seed a success-oriented information technology mindset and culture in the Austin region;
- promote the effective use of talent, capital, technology, and knowledge to resolve major information technology issues;
- encourage collaborative networking;
- attract, develop, train, and retain the best available talent;
- promote mutually beneficial foreign collaboration in information technology development and marketing;
- improve and sustain the quality of the information technology workforce;



- attract venture funding for innovation and development;
- facilitate excellence in both software and systems engineering and their derivatives; and
- develop and communicate effective strategies for reaching ASC goals.

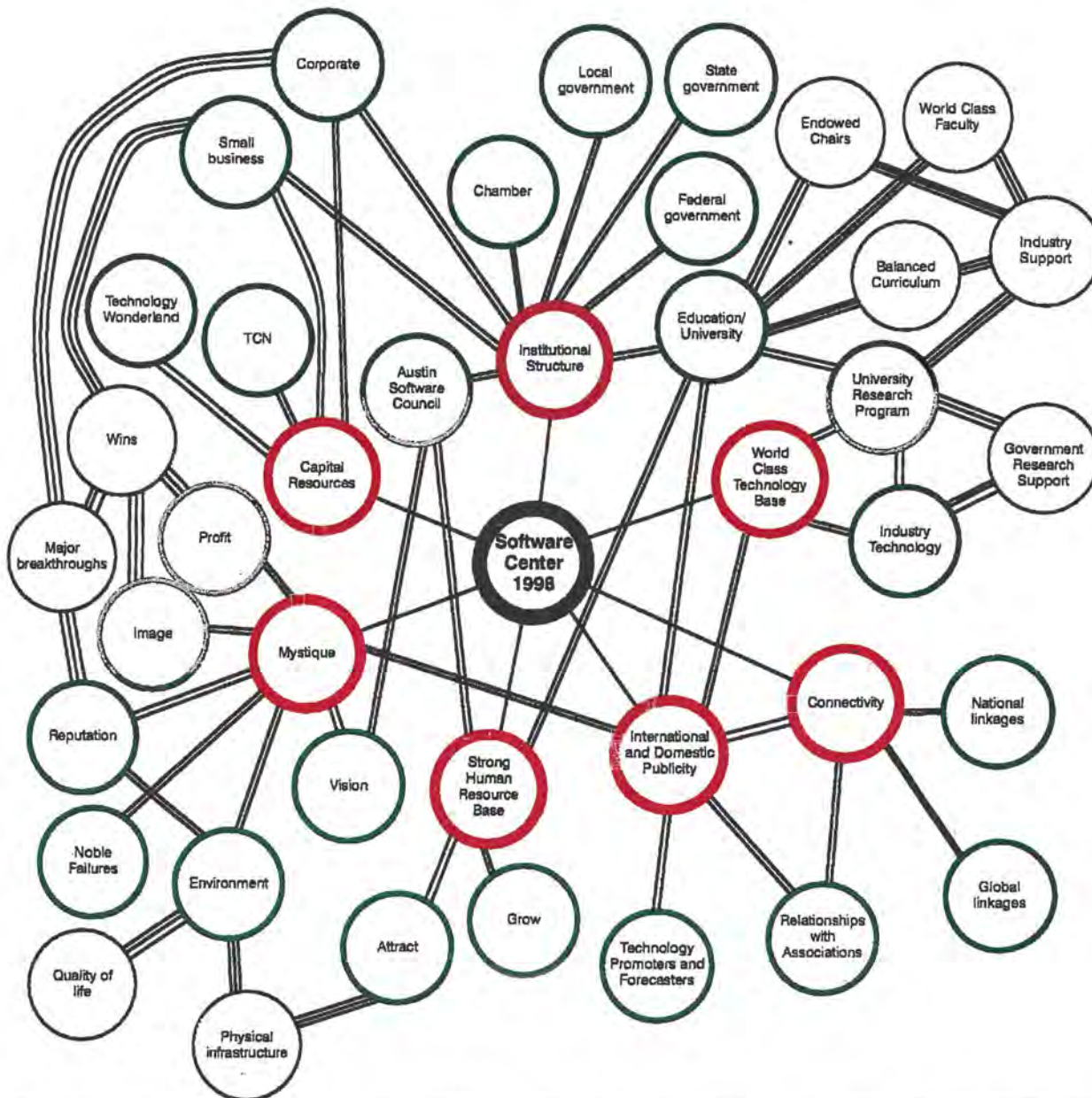
By taking calculated risks with open, honest communications, ASC will pave historically dependable success routes as paths of least resistance, while cutting new paths to success through the achievement of ASC goals. We believe that the persistent, independent, self-reliant, and imaginative attributes of our performance inevitably chart the way toward the future we seek. We seek this future within the framework of five years.

## Strategic Directions

To help identify strategic directions, we constructed a network diagram centered on the principal ASC goal of establishing Austin as the software technology center of the world by 1998. Figure 2 illustrates the final result of our network diagram, depicting the strategic directions, their enabling factors, and all intertwining relationships. Austin's recognition as a world software center by 1998 served as the focal point which drove the embodiment of *first order factors* (red, heavy bold nodes) necessary for its successful achievement. Likewise, we charted *second order factors* (green, medium bold nodes) required to achieve the first order factors, and repeated the process one more time to identify a few key *third order factors* (blue, light bold nodes). The first order factors evolved into the strategic directions detailed within this plan and are further characterized in Figure 3.

After building the network diagram nodes (as represented by the different levels of factors), we linked them together through corresponding levels of relationships. Each first order factor has a *first order relationship* with the focal goal. A single line represents this level of relationship. Each second order factor has a relationship with its principal first order factor, but it can also have such a relationship with any other second order factor. A double line represents this *second order relationship*. Each third order factor has a relationship with its principal second order factor, but it can also have such a relationship with any other second or third order factor. A triple line represents this *third order relationship*.

For example, to become the world software center by 1998 (focal point), one of the first characteristics Austin must have is an attractive mystique (first order factor). This mystique is driven by several key components (second order factors): a history of



**Figure 2. Network of Strategic Directions Reflect Our Need For Cooperative Synergy.**

profitable ventures; an image of success; a strong reputation for quality; a small, but endearing set of inspired noble failures; an enticing environment; and a collective, bold vision.

Profit and image are driven by wins (third order factor) in the same manner that: major breakthroughs fuel the substance of reputation; and quality of life and physical infrastructure enhance the environment. Note how the reputation and environment factors inter-relate with each other in mutually supportive ways.



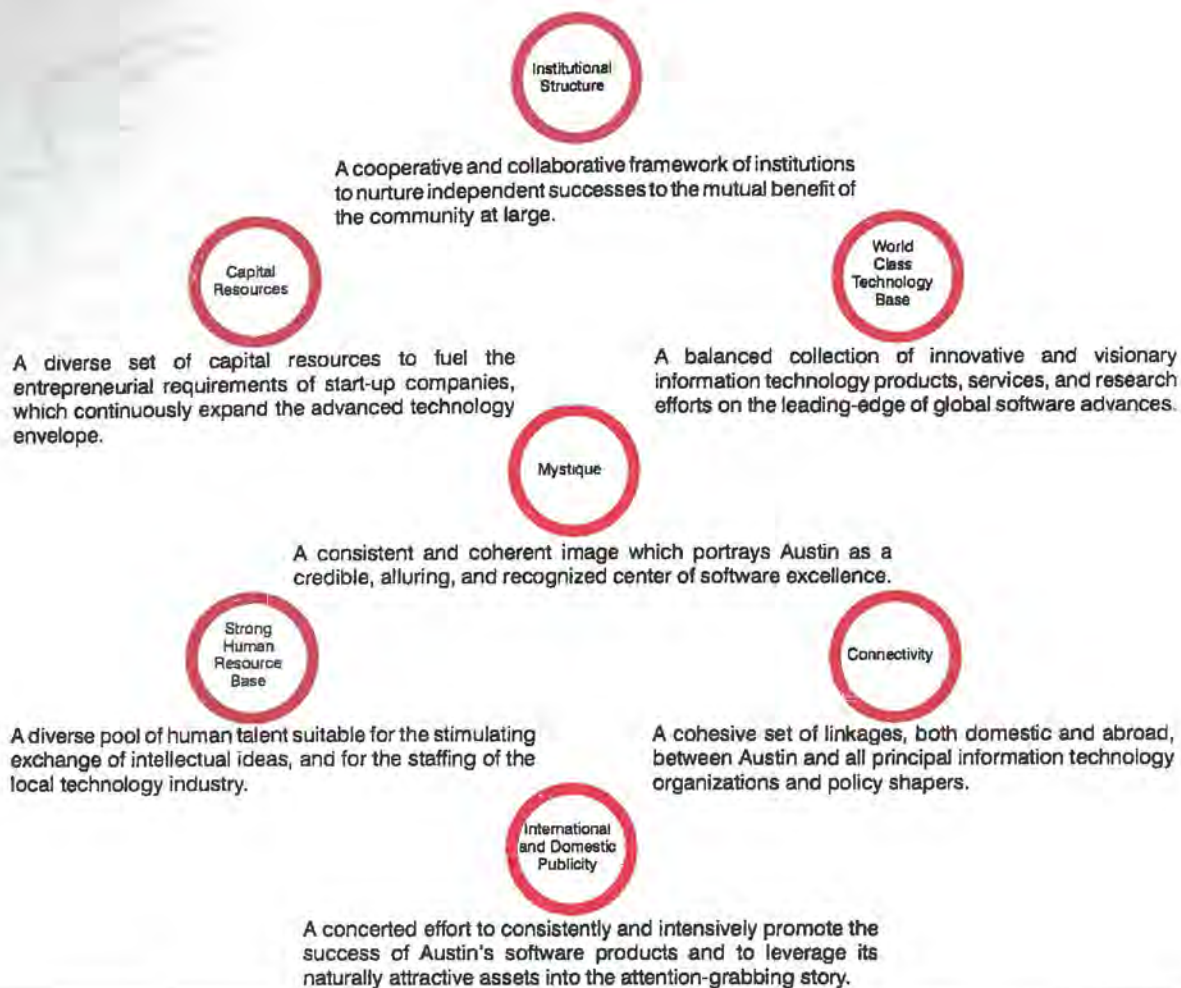


Figure 3. Austin Strategic Directions.

## Process and Methodology

Implementation of our strategic directions requires actors performing actions within the context of a well-defined methodology. The *technopolis wheel*<sup>1</sup> captures the conceptual framework on which major institutional players interact during the process of high-technology development. We used this framework to identify the actors who will implement the ASC strategic directions. As shown in Figure 4, the seven major stakeholders, or actors, encompass academia, government, industry, and other support groups. All of these stakeholders are well-represented within the Austin region.

1. *Creating the Technopolis: High-Technology Development in Austin, Texas*, R. Smilor, D. Gibson, and G. Kozmetsky, IC<sup>2</sup> Institute, The University of Texas at Austin, 1988.

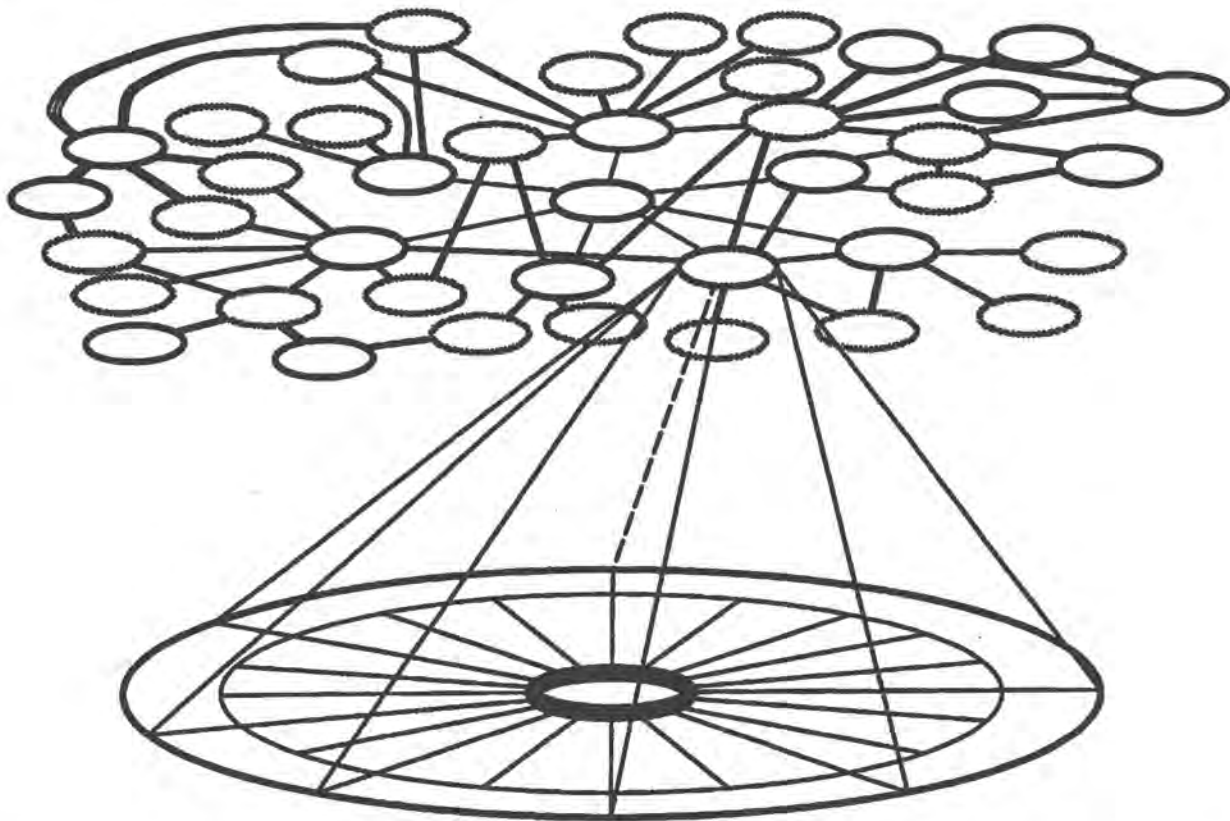




**Figure 4. The Technopolis Wheel Identifies Major Stakeholders Within Austin's Infrastructure.**

Simple mapping of actors with actions to achieve specific objectives provides the key element to succinctly describing the strategic implementation process. We achieved this simplicity through a conical representation of actions, with the technopolis wheel of stakeholders at the base, and a single strategic direction at the apex. Figure 5 depicts this conical representation and shows how each stakeholder would have their own set of actions to perform in pursuit of the given strategic direction.

The ASC has designed this strategic implementation plan with integrated stakeholders in mind. Its assembled parts represent a new expertise in technological integration and distribution that creates enduring influence with the regional customer base. The standards-based implementation structure casts the first shadow of an industrial revolution in software products, where specialized software manufacturing processes closely resemble specialized Lego construction pieces.



***Figure 5. Austin's Technopolis Wheel Directly Maps Actions Needed for Software Preeminence.***

In the following pages, we elaborate on each of the seven strategic directions with:

- a unit of conviction statement<sup>2</sup>;
- a list of associated target concerns;
- a list of specific objectives to accomplish within the context of overall strategic goals;
- a list of expected actions specific to each stakeholder; and
- a guiding conclusion statement.

These seven directions in our community enterprise architecture will either support or deny our regional success. Our only option is to be the best in each of the seven, and demonstrate the benchmarks to prove it.

2. See the Appendix for an example of the unit of conviction.

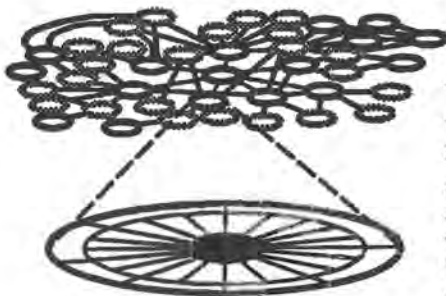
## How We Are Going To Get There

Every plan has a high-level vision of events which must take place for an organization to achieve excellence. Such a vision must be articulated into actions, which not only address the overall vision, but also extend downward to specific group and individual levels. This strategic plan is our first step toward bringing our vision into a strategic implementation process.

The actions we define, and the stakeholder groups we assign them to, reflect our recommendations of the suggested steps necessary to implement each strategic direction. Stakeholders should evaluate the appropriateness of each assigned action in the context of their respective capabilities and capacities. We expect these actions and their assigned implementors to continuously evolve as the Austin region moves toward its rightful position as the software technology capital of the world.

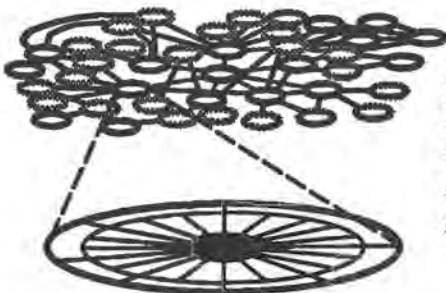
This summary version of the *Austin Software Council Strategic Plan for Software Preeminence* does not contain the complete implementation actions for each strategic direction. ASC members may receive a full copy of the plan, including those actions, through direct request of the ASC.

### **Strong Human Resource Base**



A skilled and dedicated human resource base is essential for Austin to succeed and grow as an industry software leader. Austin must attract, train, and maintain a strong human resource base in a stimulating environment in order to provide a diverse talent pool and an arena for intellectual interchange. This combination of skills and a growing experience base continuously supports the development of high quality software products which meet market needs, generate jobs, and produce revenues.

### **Mystique**

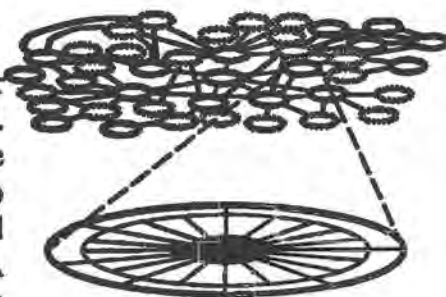


A powerful software mystique about the Austin area positively influences all aspects of Austin area industry, government, and academia. Image credibility assists in gaining sales, acquiring the necessary talent to accomplish tasks, and increasing capital resources for Austin regional businesses.



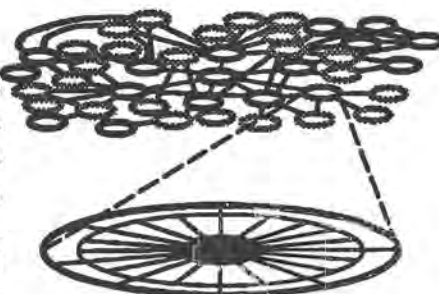
### World-Class Technology Base

A world-class software technology base is absolutely essential for Austin to become the preeminent software leader of the world. Because of its rapidly changing and very competitive nature, the software industry requires a world-class technology base to continuously increase performance, improve quality, and facilitate the creation of advanced products and applications. A world-class technology base fuels Austin's global recognition as a preeminent software center and encourages the global community to come to Austin for their software needs.



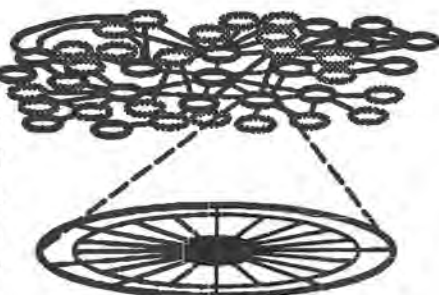
### Connectivity

As a preeminent software leader, Austin must establish and maintain a wide variety of connectivity and communication mechanisms, because the global software industry requires instant access to relevant information and competitive data, as well as collaboration among geographically dispersed enterprises. Seamless connectivity ensures the inclusion of all relevant information and affected parties during the decision making process for successful product development.



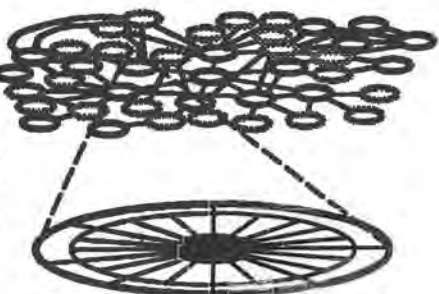
### International and Domestic Publicity

The high cost of creation, the low cost of replication and delivery, and the short profitable lifetime of software products collectively demand that Austin undertake an intensive and ongoing international and domestic publicity campaign to gain and retain maximum results within the global marketplace. This campaign leverages Austin's preeminence as a software technology leader and promotes software products and services developed in the Austin region.

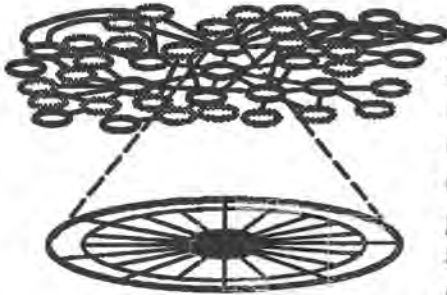


### Capital Resources

Capital resources are essential in order for Austin to reach and maintain a preeminent position in the software marketplace. Austin requires timely, responsive financial support for software companies with a diverse set of capital needs. This allows the software companies to respond to market opportunities and leverage locally developed intellectual properties.



### **Institutional Structure**



Institutional structure provides predictability, reliability, accessibility, and a sense of trust in the future so that entrepreneurs, business owners, inventors, and planners can conduct the activities which lead to innovation and economic growth. A shared vision among Austin's business, government, academic, and volunteer institutions will strengthen and nurture our regional software community. Shared task determination and accomplishment will provide significant community power when one considers competing, supporting creativity, and being more productive than others who wish to be preeminent.

## What We Have Done So Far

Soon after the *IC<sup>2</sup> Software Engineering in the 90's* conference in 1991 that catalyzed the formation of the Austin Software Council, the ASC published a report to document that conference's proceedings. For over a year, leaders in Austin's software community continued to meet and develop a mission statement with accompanying goals and objectives.

During this period, intense background activity led to the Austin Software Council's first conference, *New Software Technologies: Their Impact on Business*, in February of 1993. One month later, ASC co-sponsored the *Organizational & Collaborative Computing* conference. In April 1993, ASC held the first of a regular series of general membership meetings.

In the midst of all this activity the Austin Software Council also co-sponsored a salary survey of Austin computer professionals, established a basic electronic mail and bulletin board service for members, and participated in Austin's *Business to Business* conference. In the first six months of its existence, the Austin Software Council has grown to over 150 business and organizational memberships.

## What We Need To Do Next

In addition to building a strategic plan for achieving the ASC mission, the Strategic Planning Group identified several recurrent activities applicable to all strategic directions and the ASC membership as a whole. These recommended courses of action include:

- Establish special working groups to address implementation of each major strategic direction as identified in this Strategic Plan. Each working Strategy Group should specify tangible objectives for its particular strategic direction over the next five years, and should develop plans for achieving those objectives.

Although individual Strategy Group composition will normally be of ASC members, each Strategy Group should deliberately seek input and involvement from outside people and organizations. Strategy Groups should also adopt a schedule of specific dates for presenting objectives, plans, and results to the ASC Board of Advisors.

- The Austin region must differentiate itself from others seeking prominence in the software technology arena by establishing a reputation for: a). envisioning the software environment of the future; and b). developing products invariably on the forefront of that envisioned future. A



world-class conference concentrating on the subject of future projection and implementation would aid in establishing that reputation.

- Legalize the ASC as a non-profit entity to establish a framework for financial and other legally binding accountability issues.

Appendix

**Strategy Group Participants**  
*Strong Human Resource Base*

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David Gibson  
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Joe McCall  
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